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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,606

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Henrik Hansson

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01/21/2010

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EXAMINER

SCHAPER, MICHAEL T

ART UNIT

PAPER NUMBER

3775

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/509,606	Applicant(s) HANSSON, HENRIK	
	Examiner MICHAEL T. SCHAPER	Art Unit 3775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-14 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-14, 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 Oct 2009 has been entered.

Response to Arguments

Applicant's arguments with respect to all current claims have been considered but are moot in view of the new ground(s) of rejection.

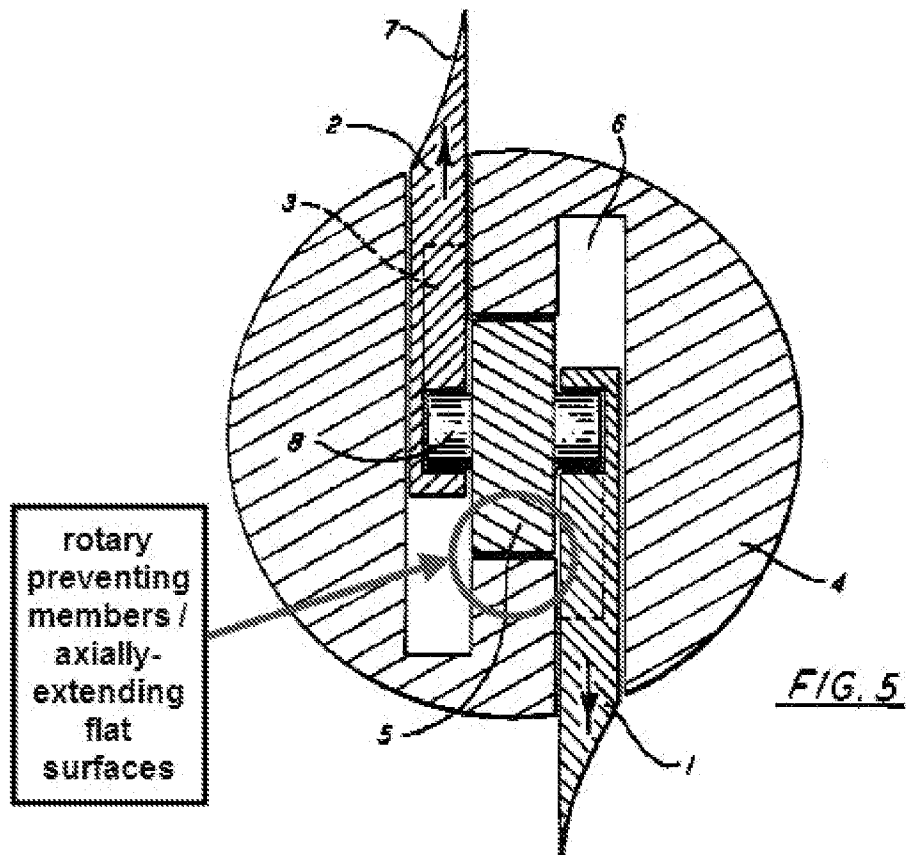
Claim Rejections - 35 USC § 102

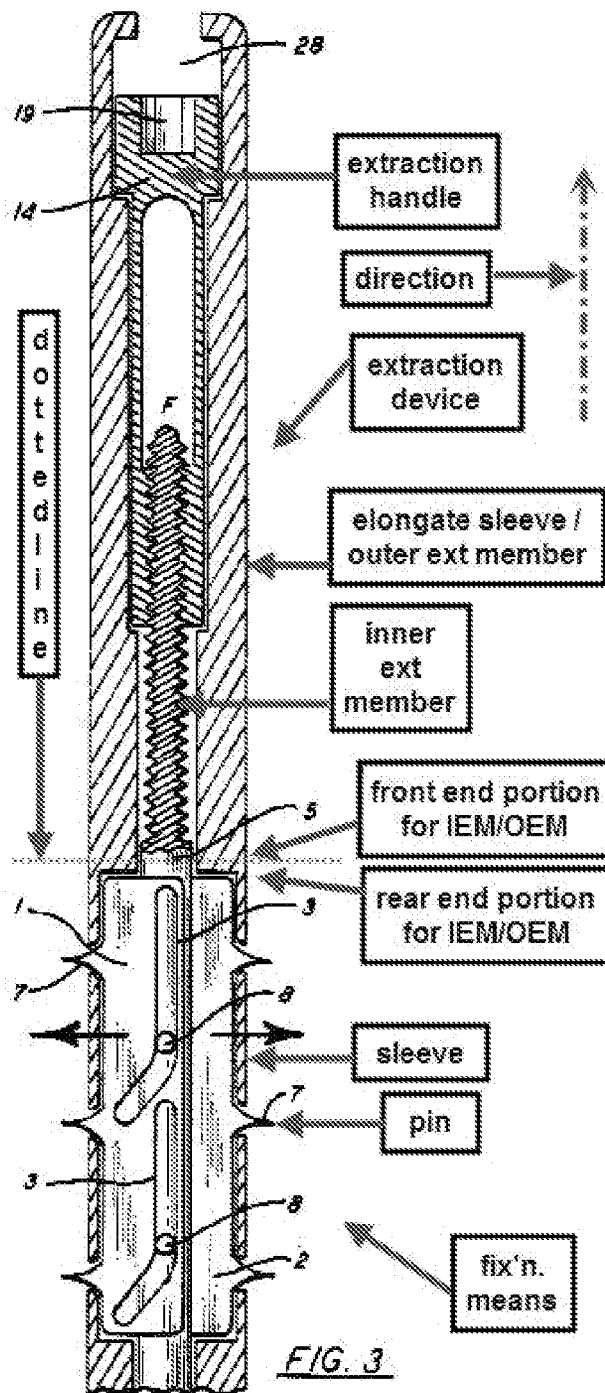
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Termanini (US 4237875).





Termanini discloses a combination of a fixation means (see examiner-annotated FIGS. 3, 5 above) for fixation of bone fragments at bone fractures and an extraction device for extracting the fixation means, the fixation means comprising a sleeve and at

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least one pin provided in said sleeve, the extraction device comprising an inner extraction member (*i.e.* permanently connectable) connectable to the pin of the fixation means, an outer extraction member connectable (*i.e.* permanently connectable) to the sleeve of the fixation means and an extraction handle that rotates relative to the outer and inner extraction members in order to extract the pin in a direction of extraction relative to the outer extraction member and the sleeve, the inner extraction member being inserted into the outer extraction member, the outer extraction member being manually holdable in order to prevent the outer extraction member from rotating when the extraction handle is rotated, the outer and inner extraction members being respectively provided with rotary preventing members that directly engage one another in order to prevent the inner extraction member from rotating relative to the outer extraction member, during extraction of the pin, the rotary preventing members of the outer extraction member being non-circular cross-sectional parts of a through hole in the outer extraction member, the rotary preventing members of the inner extraction member being non-circular cross-sectional parts, the rotary preventing members of the outer extraction member are provided in a rear end portion of the outer extraction member, the rotary preventing members of the inner extraction member are provided on a rear end portion of the inner extraction member, and the lengths of the inner and outer extraction members and the location and shape of the rotary preventing members are chosen such that the extraction handle can cooperate with the inner extraction member in order to draw the inner extraction member backwards in the direction of extraction when the inner extraction member is inserted into the outer extraction member so that

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the rotary preventing members directly engage one another; wherein the rotary preventing members of the outer extraction member include at least one axially extending flat surface on the outer extraction member, the rotary preventing members of the inner extraction member including at least one axially extending flat surface on the inner extraction member that directly engages the at least one axially extending flat surface on the outer extraction member; wherein the rotary preventing members prevent the inner extraction member from rotating relative to the outer extraction member about a longitudinal axis of the inner extraction member in first and second opposite directions; wherein the outer extraction member is an elongated sleeve which is open at both ends, and the inner extraction member fits into the outer extraction member and is axially displaceable in relation thereto.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-6, 8-9, 12-14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sevrain et al. (US 5707373) in view of Velikaris et al. (US 6524238).

Sevrain discloses a combination of a fixation means (130+140) for fixation of bone fragments at bone fractures and an extraction device (100) for extracting the fixation means, the fixation means comprising a sleeve (138) and at least one pin (142)

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provided in said sleeve, the extraction device comprising an inner extraction member (106) indirectly connectable to the pin of the fixation means, an outer extraction member (102) indirectly connectable to the sleeve of the fixation means and an extraction handle (120) that rotates relative to the outer and inner extraction members in order to extract the pin in a direction (from distal to proximal) of extraction relative to the outer extraction member and the sleeve, the inner extraction member being insertable into the outer extraction member, the outer extraction member being manually holdable in order to prevent the outer extraction member from rotating when the extraction handle is rotated; wherein the extraction device comprises at least one part (128) limiting (e.g. not a solid connection, so it limits) the extraction in order to ensure that the extraction handle, through the inner extraction member, draws the pin backwards relative to the sleeve so that a tip (prox 142) of the pin is situated in an opening (136) of the sleeve, and thereby cooperates with a rear edge (prox 136) of the opening such that the pin, through said cooperation with the rear edge of the opening, draws the sleeve backwards in the direction of extraction when the sleeve is pulled out of the bone fragment by means of the extraction handle; wherein the extraction limiting part comprises one of outer threads (at 128, see FIG. 19) on the extraction handle and inner threads on the inner extraction member having such length that the length of screwing together of the extraction handle and the inner extraction member is limited; wherein the inner extraction member has a front end portion (114,112) with such outer dimensions that it can be inserted into a rear end portion (132) of the sleeve; wherein the front end portion of the inner extraction member, which can be inserted into a rear end portion (132) of

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the sleeve, transforms into inner portions (112 at 106) of the inner extraction member having larger outer dimensions through an edge which can engage a rear edge (dist 130) of the sleeve when the inner extraction member is operating; wherein the outer extraction member has a laterally directed handle (108,110) for holding the outer extraction member such that it does not rotate when the pin is drawn in the direction of extraction; wherein the device consists of only an inner extraction member, an outer extraction member and an extraction handle (see FIGS.); wherein the opening (136) in the sleeve of the fixation means is round (see FIG. 18), and the front part (dist half of 142) of the pin has a rounded side by means of which it can cooperate with front parts (dist inner 136) of an opening in the sleeve, and another side (prox half of 142)), opposite to said rounded side, which is substantially flat and which can cooperate with rear parts (prox inner 136) of the opening.

Sevrain discloses the claimed invention except for the outer and inner extraction members being respectively provided with rotary preventing members that directly engage one another in order to prevent the inner extraction member from rotating relative to the outer extraction member during extraction of the pin, the rotary preventing members of the outer extraction member being non-circular cross-sectional parts of a through hole in the outer extraction member, the rotary preventing members of the inner extraction member being non-circular cross-sectional parts, the rotary preventing members of the outer extraction member are provided in a rear end portion of the outer extraction member, the rotary preventing members of the inner extraction member are provided on a rear end portion of the inner extraction member, and the lengths of the

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inner and outer extraction members and the location and shape of the rotary preventing members are chosen such that the extraction handle can cooperate with the inner extraction member in order to draw the inner extraction member backwards in the direction of extraction when the inner extraction member is inserted into the outer extraction member so that the rotary preventing members directly engage one another.

Velikaris discloses a releasable connection mechanism between concentric geometries in the form of rotary prevention (FIG. 2A, #5 & 20) that directly engage each other for placement in the outer and inner extraction members in order to prevent the inner extraction member from rotating relative to the outer extraction member during extraction of the pin, the rotary preventing members of the outer concentric portion being non-circular cross-sectional parts (see FIG. 2A) of a through hole (8), the rotary preventing members of the inner concentric portion being non-circular cross-sectional parts (also see FIG. 2A), the rotary preventing members of the inner and outer extraction members are provided in rear end portions of the inner and outer extraction member (see Sevrain, location of concentric connection of 102/106), and the lengths of the inner and outer extraction members and the location and shape of the rotary preventing members are chosen such that the extraction handle will be able to, after modification, cooperate with the inner extraction member in order to draw the inner extraction member backwards in the direction of extraction when the inner extraction member is inserted into the outer extraction member so that the rotary preventing members directly engage one another for firm connectability and releasability.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have modified the device of Sevrain with the outer and inner extraction members being respectively provided with rotary preventing members that directly engage one another in order to prevent the inner extraction member from rotating relative to the outer extraction member during extraction of the pin, the rotary preventing members of the outer extraction member being non-circular cross-sectional parts of a through hole in the outer extraction member, the rotary preventing members of the inner extraction member being non-circular cross-sectional parts, the rotary preventing members of the outer extraction member are provided in a rear end portion of the outer extraction member, the rotary preventing members of the inner extraction member are provided on a rear end portion of the inner extraction member, and the lengths of the inner and outer extraction members and the location and shape of the rotary preventing members are chosen such that the extraction handle can cooperate with the inner extraction member in order to draw the inner extraction member backwards in the direction of extraction when the inner extraction member is inserted into the outer extraction member so that the rotary preventing members directly engage one another in view of Velikaris for firm connectability and releasability.

Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Termanini (US 4237875) in view of Tanaka et al. (US 6053653).

Termanini discloses the claimed invention, including the inner extraction member having a rear end portion with outer threads which mesh with inner threads of a hole in

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the extraction handle (see above), except for wherein a front end portion of the inner extraction member has a hole with inner threads which mesh with outer threads of the pin, and the hole of the inner extraction member has an inlet without threads, the inlet tapering conically in a direction inwards into the hole.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to reconnectably separate the inner extraction member and the pin (e.g. at the annotated "dotted line" seen above), since constructing a formerly integral structure in various rigidly connectable elements involves only routine skill in the art.

Furthermore, Tanaka discloses a connection mechanism (see FIG. 2A) wherein a front end portion of the inner concentric member has a hole with inner threads which mesh with outer threads of the outer concentric member, and the hole of the inner concentric member has an inlet without threads, the inlet tapering conically in a direction inwards into the hole for a rigid connection.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have modified the device of Termanini with a connection mechanism wherein a front end portion of the inner concentric member has a hole with inner threads which mesh with outer threads of the outer concentric member, and the hole of the inner concentric member has an inlet without threads, the inlet tapering conically in a direction inwards into the hole in view of Tanaka for a rigid connection.

Moreover, It would have been obvious to one having ordinary skill in the art at the time the invention was made to have reversed the connection of the inner and outer

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threads, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Termanini (US 4237875) in view of Tanaka et al. (US 6053653) further in view of Cavagna et al. (US 5571102).

Termanini and Tanaka disclose the claimed invention except for wherein the inner extraction member includes lateral holes which extend into the holes with the inner threads such that the holes can be flushed clean through the lateral holes.

Cavagna discloses a cannulated geometry (see FIG. 10) with a lateral hole (30), each extending which extend into the hole with the inner threads (29) such that the holes can be flushed clean through the lateral holes for cleaning (col. 10 / lines 25-30).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have modified the device of Termanini and Tanaka with a lateral hole, each extending which extend into the hole with the inner threads such that the holes can be flushed clean through the lateral holes in view of Cavagna for cleaning.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. SCHAPER whose telephone number is (571)270-7413. The examiner can normally be reached on M-F, 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Barrett can be reached on (571)272-4746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. T. S./
Examiner, Art Unit 3775

/Thomas C. Barrett/
Supervisory Patent Examiner, Art
Unit 3775